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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/709,764	05/27/2004	Zhu-Min Di	11841-US-PA	3763

31561 7590 06/15/2006

JIANQ CHYUN INTELLECTUAL PROPERTY OFFICE
7 FLOOR-1, NO. 100
ROOSEVELT ROAD, SECTION 2
TAIPEI, 100
TAIWAN

EXAMINER	
BLACKWELL, JAMES H	
ART UNIT	**PAPER NUMBER**
2176	

DATE MAILED: 06/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/709,764	DI ET AL.	
	Examiner	Art Unit	
	James H. Blackwell	2176	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 May 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *27 May 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This Office Action is in response to an original application filed 05/27/2004 with a priority date of **05/27/2004**.

2. Claims 1-14 are currently pending. Claims 1 and 8 are independent claims.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kushler et al. (hereinafter Kushler, U.S. Patent No. 6,646,573 filed 12/03/1999, issued 11/11/2003) in view of Schroeder et al. (hereinafter Schroeder, U.S. Patent No. 5,797,098 filed 07/19/1995, issued 08/18/1998).

In regard to independent Claim 1 (and similarly independent Claim 8), Kushler teaches *a method for a fast input of a Chinese character in a mobile phone* in that the invention presents reduced keyboard-disambiguating system depicted as incorporated in a portable cellular telephone 52 having a display 53. The keyboard arrangement is customized to allow the user to input Japanese characters (Fig. 1A). Though Kushler does not teach a system for entering Chinese characters, it would have been obvious to one of ordinary skill in the art at the time of invention to conclude that the problems encountered by inputting Japanese would have been similar to that of

inputting Chinese. In fact, some Japanese characters are also Chinese characters. This system provides the benefit of effective input of such languages using a limited keyboard.

Kushler also teaches *entering into a Chinese text editing status and receiving an input code* in that the user begins by entering keyboard sequences corresponding to the character that the user desires to use as a first character (Abstract).

Kushler fails to teach *displaying a plurality of choices of Chinese characters corresponding to the input code*. However, Schroeder suggests such a limitation (see Claim 1, part (a); teaches displaying an initial character subset generated from an initial input). It is noted that Schroeder does not specify Chinese characters. However, it would have been obvious to one of ordinary skill in the art at the time of invention that the feature would have functioned for any typically available character set, providing the benefit of using the same engine for multiple languages.

Schroeder also teaches that *the plurality of the choices of the Chinese characters being arranged in a list in an order based on a usage frequency of each of the plurality of the choices of the Chinese characters* in that once an initial character is chosen (selected using keys on a limited reduced keyboard of the mobile phone; pressing of keys being understood to constitute an *input code*, as claimed), a next character subset is displayed comprising a plurality of characters, on the display, wherein the characters in the next character subset are determined to be the next most probable characters based on at least one preceding input character (Claim 1, part (2); at least suggests that next choices are based on a statistical likelihood).

Schroeder also teaches selecting one Chinese character from the plurality of the choices of the Chinese characters by a user (Claim 1, see above).

Schroeder also teaches *adjusting the usage frequency of the selected Chinese character* in that the initial character subset is statistically determined from sample text to be the most common initial characters of words appearing in such sample text and the initial character subset is *periodically updated by analyzing the character frequencies* of messages entered by a user over time (Claim 1, step (h)). It would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Kushler and Schroeder as both inventions relate to input of characters using devices with limited keyboard resources. Adding the teaching of Schroeder provides the benefit of choosing next characters to create words based on statistical likelihood of those characters being the next chosen and saving keystrokes allowing for more effective and efficient communications with such limited devices.

In regard to dependent Claim 2 (and similarly dependent Claim 9), Kushler fails to explicitly teach *searching for the plurality of the choices of the Chinese characters and the order of the plurality of the choices of the Chinese characters based on the input code*. However, Schroeder teaches such a limitation (see Schroeder, Claim 1).

Kushler does not explicitly teach *examining a plurality of weighting values, each of the plurality of weighting values corresponding to the usage frequency of one of the plurality of the choices of the Chinese characters.* However, Schroeder does teach that the initial character subset is statistically determined from sample text to be the most

common initial characters of words appearing in such sample text and the initial character subset is *periodically updated by analyzing the character frequencies* of messages entered by a user over time (Claim 1, step (h)). Thus, it would have been obvious to one of ordinary skill in the art at the time of invention to conclude that weights were involved in determining the ordering and choices of characters to present since Schroeder teaches that statistic govern how choices of characters and their presentation order are determined and periodically updated; weights being a likely component of such a statistical computation, providing the benefit of accuracy in presenting selection candidates to the user after each previous selection.

Schroeder also teaches *determining whether to adjust the order of said the list of the plurality of the choices of the Chinese characters based on the plurality of the weighting values* (steps f, g, h of Schroeder Claim 1 make this determination).

Schroeder also teaches *adjusting the weighting value of any one of the choices of the Chinese characters with the order being adjusted when determining whether to adjust the order of the plurality of the choices of the Chinese characters;* and *displaying the plurality of the choices of the Chinese characters based on the order of the plurality of the choices of the Chinese characters* (Schroeder, Claim 1). It would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Kushler and Schroeder as both inventions relate to input of characters using devices with limited keyboard resources. Adding the teaching of Schroeder provides the benefit of choosing next characters to create words based on statistical

likelihood of those characters being the next chosen and saving keystrokes allowing for more effective and efficient communications with such limited devices.

In regard to dependent Claim 3 (and similarly dependent Claims 10, and 11), Claim 3 (and similarly Claims 10, and 11) contains subject matter similar to that found in Claim 2 (and similarly Claim 9) and are rejected along similar lines of reasoning.

In regard to dependent Claim 4 (and similarly dependent Claim 12), Kushler fails to teach *the step of adjusting the weighting value of any one of the choices of the Chinese characters comprises adding 1 to the weighting value of any one of the choices of the Chinese characters that is adjusted.* However, Schroeder suggests such a limitation (Claim 1, part (2) suggests adjusting weights). It would have been obvious to one of ordinary skill in the art at the time of invention to add any value to a weight in order to adjust it; increasingly positive numbers may indicate that more (or less) weight is to be given to a chosen character. It would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Kushler and Schroeder as both inventions relate to input of characters using devices with limited keyboard resources. Adding the teaching of Schroeder provides the benefit of choosing next characters to create words based on statistical likelihood of those characters being the next chosen and saving keystrokes allowing for more effective and efficient communications with such limited devices.

In regard to dependent Claim 5 (and similarly dependent Claim 14), Kushler fails to teach *resetting the plurality of the weighting values of the plurality of the choices*

of the Chinese characters to an initial value 1 when one of the plurality of the weighting values reaches a maximum value. However, Schroeder suggests such a limitation (Claim 1, part (2) suggests adjusting weights). It would have been obvious to one of ordinary skill in the art at the time of invention to add any value to a weight in order to adjust it; increasingly positive numbers may indicate that more (or less) weight is to be given to a chosen character. In addition, it would have been likely that such weights would have been reset from time to time based in part on storage limitations of the device. It would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Kushler and Schroeder as both inventions relate to input of characters using devices with limited keyboard resources. Adding the teaching of Schroeder provides the benefit of choosing next characters to create words based on statistical likelihood of those characters being the next chosen and saving keystrokes allowing for more effective and efficient communications with such limited devices.

In regard to dependent Claim 6 (and similarly dependent Claim 13), Kushler fails to teach that *an initial value of the plurality of the weighting values is 1*. However, it would have been obvious to one of ordinary skill in the art at the time of invention to set initial values of weights to 1 as this was well known in the art at the time of invention and represents a normalization or starting point, just as using any other starting number. Also, it was well known to begin any sort of predicting mechanism with each possible value being given equal weight. Weights are then adjusted as inputs are provided.

In regard to dependent Claim 7, Claim 7 contains subject matter similar to that found in Claim 1 (and similarly Claim 8), and is rejected along the same lines of reasoning.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James H. Blackwell whose telephone number is 571-272-4089. The examiner can normally be reached on Mon-Fri.

6. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Heather R. Herndon can be reached on 571-272-4136. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

7. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

James H. Blackwell
06/08/2006

William L. Bashore
WILLIAM BASHORE
PRIMARY EXAMINER